



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,604	06/23/2003	Ross K. Hill	CANATXX6:CIP	8916
21897	7590	06/05/2008	EXAMINER	
THE MATTHEWS FIRM 2000 BERING DRIVE SUITE 700 HOUSTON, TX 77057			BORISSOV, IGOR N	
			ART UNIT	PAPER NUMBER
			3628	
			MAIL DATE	DELIVERY MODE
			06/05/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/601,604	Applicant(s) HILL ET AL.	
	Examiner Igor N. Borissov	Art Unit 3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/21/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 14 and 42 is/are pending in the application.
- 4a) Of the above claim(s) 1-6 and 42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Amendment received on 02/21/2008 is acknowledged and entered. Claims 7-13, 15-41 have been canceled. Claims 1, 2 and 14 have been amended. New claim 42 has been added. Claims 1-6, 14 and 42 are currently pending in the application.

Examiner's statement

Amended Claim 1 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

- A. Claims 1-6 and 42 drawn to a method for injecting gas in an underground formation, classified in class 405, subclass 53.
- B. Claim 14 drawn to an apparatus for trading in gas, classified in class 705, subclass 37.

Inventions A and B are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention A has utility separate from that of inventions B such as using an underground earth formation for gas storage. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, or patentability requirements, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention (trading in gas), this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 1-6 and 42 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kennelley et al. (US 6,298,671 B1) in view of in view of Bishop (US 5,129,759) and further in view of Garnier (US 1,679,417).

Claim 14. Kennelley et al. teaches a system for storing natural gas in subterranean formation and delivering the gas to a marketplace, comprising:

at least one low pressure underground salt formation storage facility operating in the pressure range of 200-2500 psi (C. 4, L. 11-17; C. 5, L. 6);

a natural gas pipeline connected with the at least one storage facility having natural gas therein (Fig. 1; C. 4, L. 18-25)

a trading system operable for making trades related to gas (suggests short trading) (C. 4, L. 55-56);

wherein the use of a computer is old and well known in the art for the benefit of saving time and avoiding possible human mistakes.

While Kennelley et al. teaches storing gas in the subterranean formation, Kennelley et al. does not specifically teach that said subterranean formation includes a salt formation. Also, Kennelley does not teach that the natural gas is caused to be injected into, and drawn from said storage facility through the same pipe.

Bishop teaches a method and system for storing natural gas in subterranean formation, wherein said formation is a salt formation (Abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Kennelley et al. to include that said subterranean formation

includes a salt formation, as disclosed in Bishop, because it would advantageously allow to utilize subterranean formation of various types, thereby enhance the versatility of the system.

Garnier teaches a gas pumping apparatus, wherein the gas is injected into, and drawn from an underground storage facility through the same pipe (Fig 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Kennelley et al. and Bishop to include that said natural gas is caused to be injected into, and drawn from said storage facility through the same pipe, as disclosed in Bishop, because it would advantageously allow to save funds. Furthermore, in this case, each of the elements of the cited references combined by the Examiner performs the same function when combined as it does in the prior art. Thus, such a combination would have yielded predictable results. See *Sakraida*, 425 U.S. at 282, 189 USPQ at 453. Therefore, Supreme Court Decision in *KSR International Co. v. Teleflex Inc.* (KSR, 82 USPQ2d at 1396) forecloses the argument that a specific teaching, suggestion, or motivation is required to support a finding of obviousness. See the recent Board decision *Ex arte Smith*, --USPQ2d--, slip op. at 20, (Bd. Pat. App. & Interf. June 25, 2007).

Response to Arguments

Applicant's arguments filed 02/21/2008 have been fully considered but they are not persuasive.

In response to applicant's argument that neither Kennelley et al. nor Bishop, alone or in combination, teach, disclose, or even suggest a single pipeline for both introducing gas into a shallow depth underground salt formation storage facilities and removing gas from a shallow depth underground salt formation storage facilities, it is noted that Garner was applied for this feature. Specifically, Garner discloses an arrangement for storing natural gas in underground formation wherein a single pipe is utilized for injecting the gas into and drawing the gas from said cavern (See the discussion above).

The remaining applicant's arguments essentially repeat the arguments presented above; therefore, the responses presented by the examiner above are equally applicable to the remaining applicant's arguments.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Igor Borissov whose telephone number is 571-272-6801. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Hayes can be reached on 571-272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Igor N. Borissov/
Primary Examiner, Art Unit 3628
06/01/2008